Claim Amendments

Claims 1-9 (Canceled).

10. (original) In a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting and receiving data packets from another one of the nodes over one of the radio channels, the control channel being available for transmission of control packets from any of the plurality of nodes, a method of controlling access to the control channel in order to minimize collisions between control packets comprising the steps of:

(a)   receiving a control packet transmitted over the control channel at one of the plurality of nodes requiring access to the control channel; and

(b)   inhibiting transmission over the control channel from the node requiring access for a predetermined amount of time after the receipt of a control packet sufficient to allow the node addressed by the control packet to transmit a responsive control packet, thereby minimizing collisions between control packets on the control channel.

11. (original) The method of Claim 10, further comprising the steps of dividing the control channel into a series of major time slots; and

dividing each major time slot into a series of mini-slots,

wherein the predetermined amount of time corresponds to the duration of a major time slot.

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12. (original) The method of Claim 11, wherein the node addressed by the control packet transmits a responsive control packet in the first mini-slot within the major slot immediately following receipt of the control packet.

13. (original) The method of Claim 11, further comprising the step of assigning the node requiring access to a mini-slot within the first major slot following transmission of the responsive control packet.

14. (original) The method of Claim 13, wherein the step of assigning is based on the priority of the packet by the node requiring access.

15. (original) The method of Claim 11, wherein the number of mini-slots equals the number of nodes.

16. (original) In a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting or receiving packets from another one of the nodes over one of the radio channels, the control channel being available for transmissions of requesting and responsive control packets from any of the plurality of nodes, a method of controlling access to the control channel in order to minimize collisions between control packets comprising the steps of:

(a)   dividing the control channel into a series of time frames;

(b)   dividing each of the time frames into a plurality of time slots;

(c)   assigning each of the time slots to one of the plurality of nodes; and

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(d)   transmitting requesting control packets only in the time slot assigned to the transmitting node.

17. (original) The method of Claim 16, wherein each time slot is approximately twice as long in duration as the time necessary to transmit a control packet.

18. (original) The method of Claim 16, further comprising the step of transmitting responsive control packets only in the time slot assigned to the node transmitting requesting control packets.

19. (original) In a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting or receiving packets of data from another one of the nodes over one of the radio channels, the control channel being available for transmissions of requesting and responsive control packets from any of the plurality of nodes, a method of controlling access to the control channel in order to minimize collisions between control packets comprising steps of:

(a)   dividing the control channels into a series of time slots;

(b)   providing a plurality of mini-slots at the beginning of each time slot;

(c)   assigning each of the mini-slots in each time slot to one of the plurality of nodes;

(d)   transmitting requesting control packets during the mini-slot assigned to the transmitting node.

20. (original) The method of Claim 19, wherein the number of mini-slots in a time slot equals the number of nodes and the step of assigning each of the mini-slots comprises cyclically rotating the assignment of mini-slots from one time slot to the next time slot.

21. (original) A communication system comprising:

a plurality of nodes, each of said nodes including a means for transmitting and a means for receiving data packets;

a plurality of radio channels, one of said radio channels designated a control channel said control channel being available for transmissions of control packets from any of the plurality of nodes, said nodes monitoring the control packets for information regarding the availability of said radio channels; and

means for controlling access to the control channel in order to minimize collisions between control packets, said means for controlling access permitting a node to transmit a control packet over the control channel following a predetermined amount of time after the receipt of a control packet transmitted over the control channel, the predetermined amount of time sufficient to allow the node intended to receive the control packet to transmit a responsive control packet.

Claims 22-25 (canceled).

26. (original) A method of controlling access to a radio channel in a communication system that includes a plurality of nodes communicating over the radio channel comprising the steps of:

receiving at one of the plurality of nodes requiring access to the radio channel a control packet indicating the completion of data exchange over the channel;

transmitting a control packet requesting access to the radio channel in order to communicate with another node from the node requiring access following a predetermined amount of time after the receipt of the control packet indicating the completion of data exchange, the predetermined amount of time being sufficient to allow the node intended to receive the control packet to transmit a responsive control packet.

27. (original) The method of Claim 26, further comprising the steps of:

dividing the radio channel into a plurality of time slots;

providing a plurality of mini-slots at the beginning of each time slot;

assigning each of the mini-slots in each time slot to one of the plurality of nodes; and

transmitting the control packet requesting access to the radio channel only during the mini-slot assigned to the node requiring access.

28. (original) The method of Claim 27, wherein the step of assigning is based on the priority of the control packet to be transmitted by the node.

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29. (original) A method of controlling access to a radio channel in a communication system that includes a plurality of nodes communicating over the radio channel, the radio channel being available for transmissions of messages from any of the plurality of nodes, the method comprising the steps of:

    (a)   dividing the radio channel into a series of time slots;

    (b)   providing a plurality of mini-slots at the beginning of each time slot;

    (c)   assigning each of the mini-slots in each time slot to one of the plurality of nodes; and

    (d)   transmitting a request for access to the radio channel, from a node having a message to deliver to another one of the plurality of nodes, only during the mini-slot assigned to the transmitting node, prior to delivering the message.

30. (original) The method of Claim 29, wherein the number of mini-slots in a time slot equals the number of nodes and the step of assigning each of the mini-slots comprises cyclically rotating the assignment of mini-slots to nodes from one time slot to the next time slot.

Claims 31-39 (canceled).

40. (previously presented) The method of Claim 16, further comprising the steps of:

    (e)   monitoring the control channel to determine the availability of each of the plurality of data channels;

(f)   negotiating an agreement between a source and a destination node over the control channel to accept one of the plurality of available data channels for conducting communications;

(g)   conducting communications between the source and destination nodes over the accepted data channel;

(h)   releasing the accepted data channel; and

(i)   informing the others of the plurality of nodes upon completion of communications that the accepted data channel has been released.